

## Quarterly Groundwater Monitoring Report Fourth Quarter 2004

7-Eleven Store #23233  
8499 Gerber Road  
Sacramento, California

SECOR Project No.: 77EL.23233.04

**Submitted by:**  
SECOR International Incorporated  
3017 Kilgore Road, Suite 100  
Rancho Cordova, CA 95670  
916-861-0400

**Prepared on behalf of:**  
7-Eleven, Inc.  
Mr. Ken Hilliard  
P.O. Box 711  
Dallas, TX 75221-0711

December 1, 2004

Prepared by:



Damon Brown  
Staff Geologist

Reviewed By:

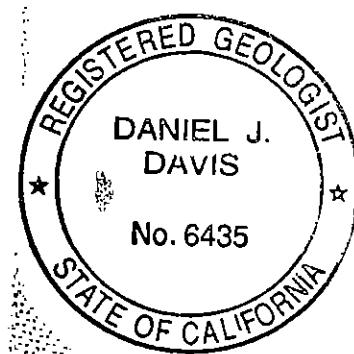


Jaff Auchterlonie  
Senior Geologist

Reviewed by:



Daniel J. Davis, R.G.  
Senior Geologist



DATE: December 1, 2004

**S E C O R****7-ELEVEN, INC. QUARTERLY REPORT**

Store Number:	<b>7-Eleven Store #23233</b>
Site Address:	8499 Gerber Road, Sacramento, CA
7-Eleven Contact:	Mr. Ken Hilliard
Consulting Company:	SECOR International, Inc. – Mr. Jaff Auchterlonie
SECOR Project No.:	77EL.23233.04
Primary Agency:	Sacramento County Environmental Management Department (SCEMD)

**WORK PERFORMED THIS QUARTER [Fourth – 2004]**

1. Conducted groundwater monitoring and sampling on October 14, 2004.
2. Prepared quarterly groundwater sampling and status report.

**WORK PROPOSED FOR NEXT QUARTER [First – 2005]**

1. Perform quarterly groundwater monitoring and sampling.
2. Prepare status report.
3. Submit site closure request to SCEMD.

**DISCUSSION**

The site is an active 7-Eleven convenience store and retail gasoline fueling facility with three 10,000-gallon gasoline underground storage tank (UST) (Figures 1 and 2). The current groundwater monitoring and sampling data are summarized in Table 1, and presented on Figures 2 and 3. Historical groundwater monitoring and sampling results are summarized in Table 2. The well completion details are summarized in Table 3.

**Current Site Information**

Current Phase of Project:	<b>Groundwater Monitoring</b>
Frequency of Monitoring and Sampling:	Quarterly, Three wells- MW-1 through MW-3
Are Liquid Phase Hydrocarbons Present On-site:	No
Water Supply Wells within a 2,000-foot radius and their Respective Direction:	Two wells located approx. 1,850 ft to the northwest
Current Remediation Techniques:	None
Permits for Discharge:	None
Historic Range in Depth to Water, Q1-04 to Q4-04	MW-1, 74.84 to 76.24 feet bgs
<b><u>Current Quarter Monitoring Data</u></b>	(See Figure 2 and Table 1)
Wells Monitored and Sampled:	Three wells- MW-1 through MW-3
Dissolved Oxygen Concentrations Measured In:	Three wells- MW-1 through MW-3
Depth to Groundwater (DTW)	75.23 to 76.24 ft bgs
Average Change in Groundwater Elevation Since Last Event:	0.22 foot decrease

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7-Eleven Store #23233

Quarterly Groundwater Monitoring Report (4Q2004)

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Groundwater Flow Direction and Gradient:

Northeast @ 0.0004 foot per foot  
(Figure 2)

## Current Quarter Analytical Data

Maximum TPHg Concentrations

(See Figure 3 and Table 1)

Maximum Benzene Concentrations

Not Detected, <50 µg/L

Maximum MtBE Concentrations

Not Detected, <0.50 µg/L

Maximum TBA Concentrations

Not Detected, <0.50 µg/L

Maximum TBA Concentrations

Not Detected, <5.0 µg/L

## **BACKGROUND**

On March 8, 1996, soil samples were collected beneath the dispensers and along product lines at the site during a fuel line upgrade work. The highest concentration of total petroleum hydrocarbons as gasoline (TPHg), 1,100 milligrams per kilogram (mg/kg) was detected in soil sample D-3-2.5' collected under the southwestern dispenser. Concentrations of methyl-tert-butyl ether (MtBE) ranged from 0.054 mg/kg to 0.09 mg/kg; benzene was not detected in any dispenser or product line soil samples (Groundwater Technology Inc, 1996).

On March 12 and 13, 1996, additional soil samples were collected within the canopy foundation footings to define the extent of petroleum hydrocarbon contamination beneath the dispensers. The highest concentrations of benzene and TPHg were detected in soil sample D-3C-6' at 0.091 mg/kg and 110 mg/kg, respectively. MtBE was not detected above laboratory reporting limits in any canopy footing soil samples (GTI, 1996).

On March 15, 1996, GTI submitted an unauthorized release report to the SCEMD. On March 21, 1996, Cris Hamilton with the SCEMD confirmed via phone that the vertical extent of contamination was adequately defined and no further action would be necessary at the site.

On July 17, 2003, SECOR collected soil samples beneath the two fuel dispensers during fuel system upgrade work. Concentrations of MtBE were detected at 0.18 mg/kg (D1-3.0') and 0.053 mg/kg (D2-2.5'). Tert-amyl-methyl ether (TAME) was reported at a concentration of 0.0066 mg/kg in soil sample D1-3.0'. Soil samples did not contain concentrations of TPHg, benzene, toluene, ethylbenzene and xylenes (BTEX), diisopropyl ether (DIPE), ethyl-tert-butyl ether (EtBE), tert-butyl alcohol (TBA) or 1,2-dichloroethane (1,2 DCA) above laboratory reporting limits.

Based on the presence of reportable concentrations of petroleum hydrocarbons in the soil samples collected beneath the dispensers, SCEMD filed an Unauthorized Release Form on October 30, 2003.

SECOR submitted a Site Assessment Report with the SCEMD on June 23, 2004, requesting site closure due to the absence of hydrocarbons detected above reporting limits since monitoring was initiated. The SCEMD conditionally approved site closure in a letter dated August 26, 2004, requesting SECOR submit a formal site closure package.

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## MONITORING AND SAMPLING PROCEDURES

The depth to water was measured to within 0.01 feet bgs in monitoring wells MW-1 through MW-3 from the top of casing (TOC) using a water level indicator. Dissolved oxygen concentrations were also measured in the wells using a YSI Model 550A dissolved oxygen meter equipped with a down hole sensor.

Well purging and sampling equipment was thoroughly cleaned prior to purging and sampling the wells. The sampling procedure for the wells included measuring the water level and checking for the presence of liquid-phase hydrocarbons (LPH), using either an electronic indicator and a clear Teflon® bailer or an oil-water interface probe. Wells not containing LPH were purged of approximately three casing volumes of water (or to dryness) using a submersible pump or bailer. The equipment and purging methods used for the current sampling event are noted on the field data sheets in Attachment A. During purging, temperature, pH, and electrical conductivity were monitored. After purging, the water level was allowed to recover to 80% of the original level prior to collection of the water sample. Groundwater samples were collected using a disposable Teflon® bailed, placed into appropriate Environmental Protection Agency (EPA) approved containers, labeled, logged onto chain-of-custody documents, and transported on ice to a California state-certified laboratory. Copies of the field notes are presented in Attachment A.

## GROUNDWATER SAMPLE ANALYSES AND RESULTS

The groundwater samples collected from MW-1 through MW-3 were analyzed for the presence of TPHg, BTEX, MtBE, TBA, DIPE, EtBE, TAME, and 1,2-DCA by EPA Method 8260B. The certified laboratory analytical report and chain-of-custody documentation are presented as Attachment B.

Groundwater analytical results are presented on Figure 3, and are summarized in Tables 1 and 2.

## PURGE AND RINSATE WATER DISPOSAL

Water generated during well sampling and equipment cleaning was pumped into a SECOR truck-mounted water tank. The water was transferred into properly labeled 55-gallon drums and stored on-site. The drummed non-hazardous water is transported quarterly by Belshire Environmental to DeMenno Kerdoon in Compton, California, for disposal.

## ATTACHMENTS

Figures

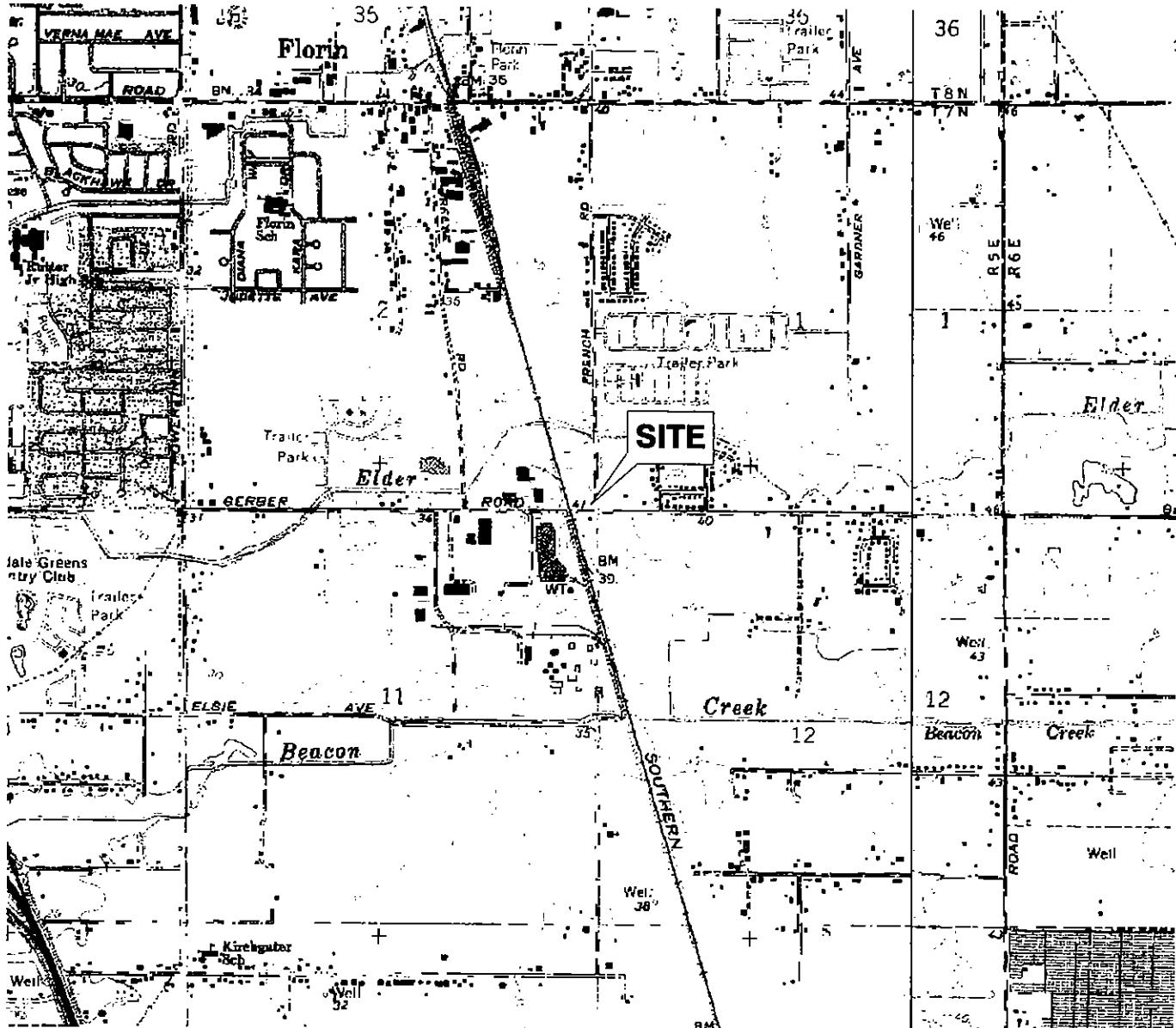
Tables

Attachment A – Field Notes

Attachment B – Certified Laboratory Analytical Reports and Chain-of-Custody Documentation

cc: Ms. Laura Marshall, R.G., Sacramento Co. Environmental Management Department  
Ms. Christyl Escarda, Regional Water Quality Control Board, Central Coast Region

**FIGURES**



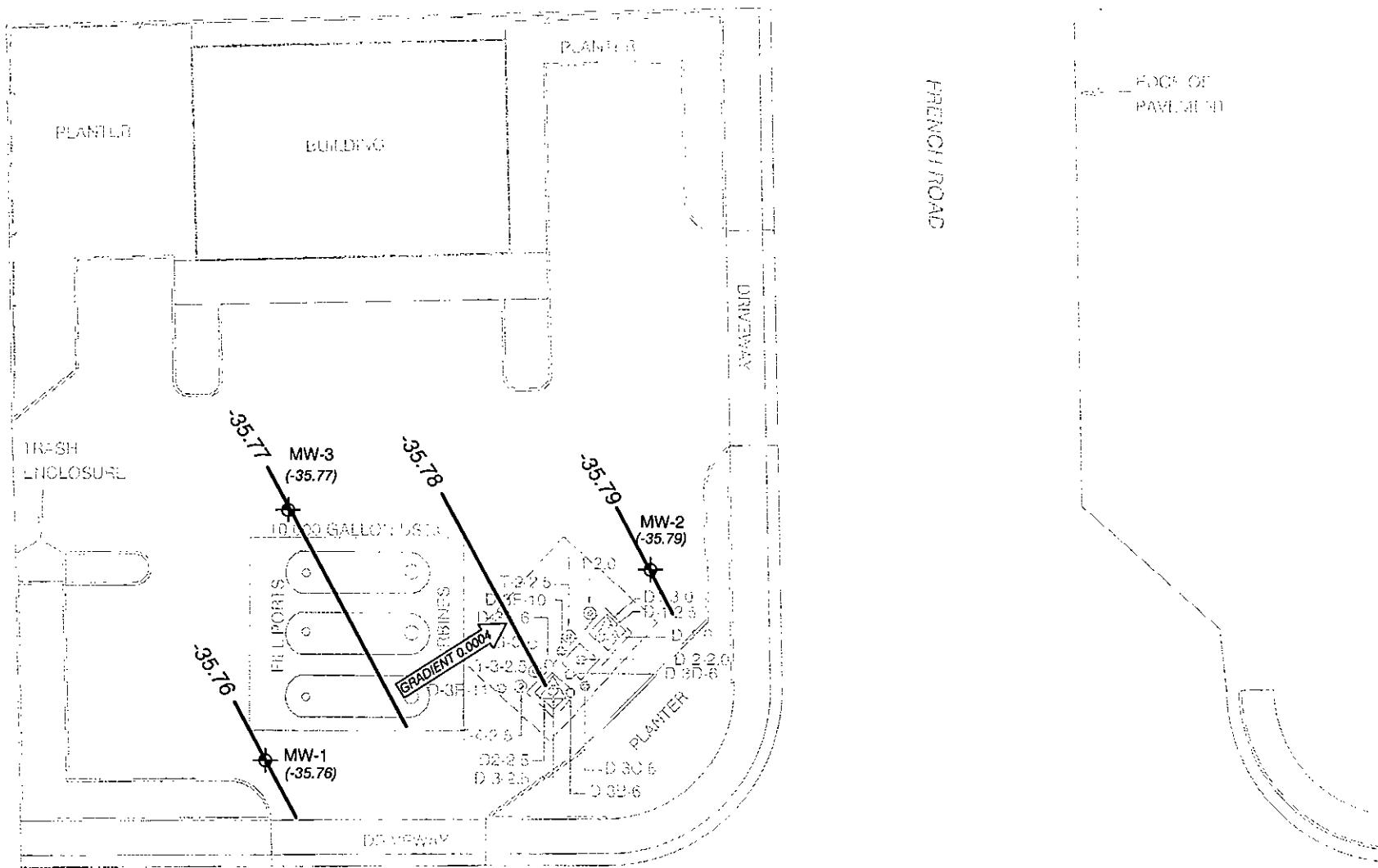
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NORTH REGION 5

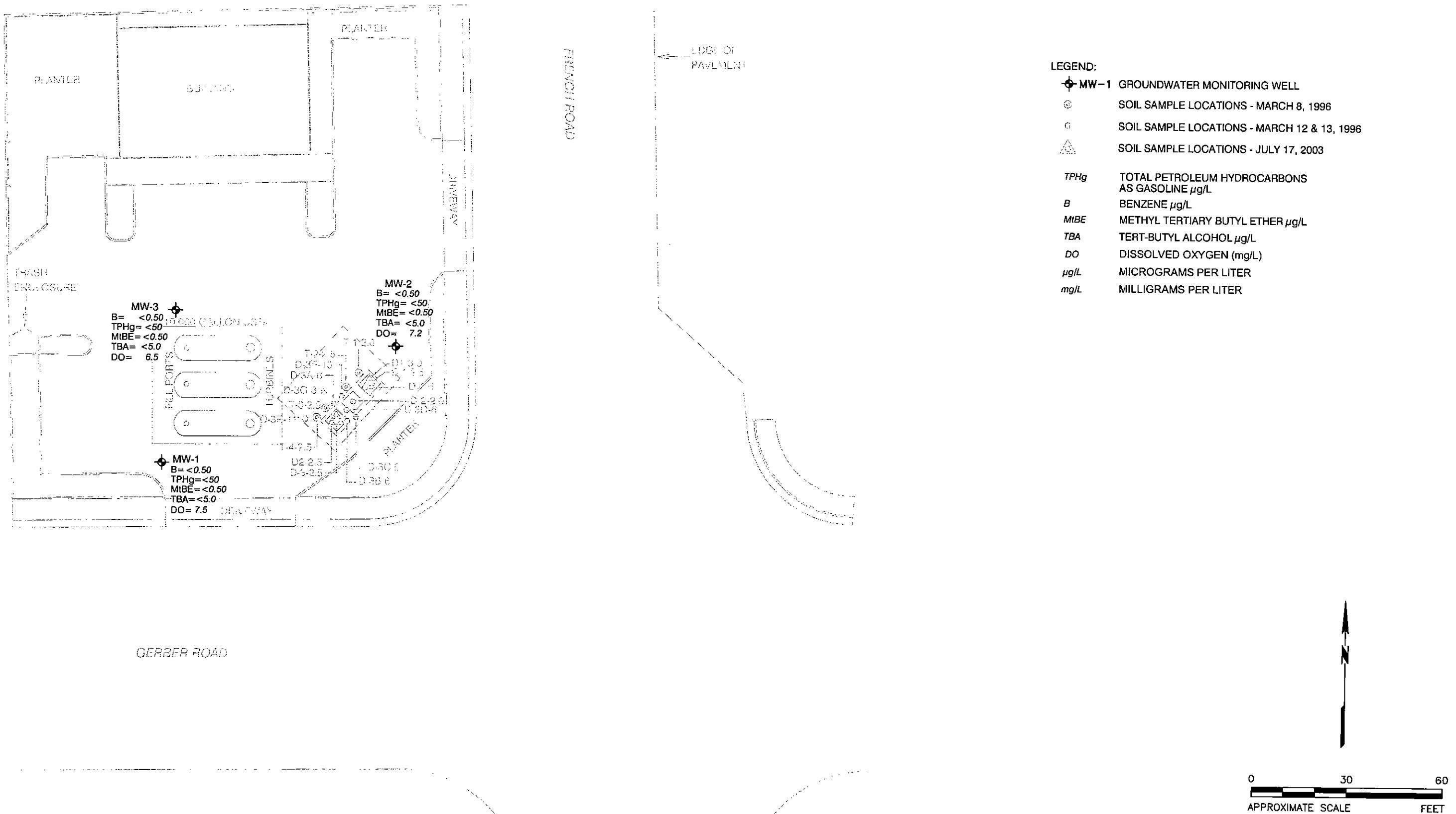
0 2000 4000  
SCALE IN FEET



DRAWN	DWR
APPR	JSA
DATE	16/7/04 DWR
JOB NO.	77EL.23233.03.0518

**FIGURE 1**  
7-ELEVEN, INC.  
FACILITY NO. 23233  
8499 GERBER ROAD  
SACRAMENTO, CALIFORNIA  
**SITE LOCATION MAP**





**REFERENCE: THIS FIGURE IS BASED ON A "SITE PLAN" PROVIDED BY SOUTHLAND CORPORATION, DATED DECEMBER 1995, AND IS INTENDED FOR ILLUSTRATION ONLY.**

DRAWN BY: DWR  
CHECKED: DG  
APPROVED: JSA  
DATE: 11/2/04 PR  
JOB NO.: 77EL\_23233.04  
CAD FILE: GW CONC 04-3Q



3017 KILGORE ROAD, SUITE 100  
BANCHO CORDOVA, CA 95670

PREPARED FOR:  
7-ELEVEN  
FACILITY NO. 23233

**FIGURE 3**  
**GROUNDWATER HYDROCARBON  
CONCENTRATION MAP  
OCTOBER 14, 2004**

**TABLES**

**Table 1**  
**Fourth Quarter 2004 Groundwater Monitoring and Analytical Data**

7-Eleven Store #23233  
 8499 Gerber Road  
 Sacramento, CA

Well ID / Elevation (TOC)	Date	Benzene	Toluene	Ethyl-Benzene	Xylene	TPHg	MtBE	TBA	DIPE	ETBE	TAME	1,2-DCA	Dissolved Oxygen	DTW (feet)	SPT (feet)	WTE (feet)	
MW-1 40.48	10/14/04	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	7.5	76.24	0.00	-35.76
MW-2 39.44	10/14/04	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	7.2	75.23	0.00	-35.79
MW-3 40.18	10/14/04	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	6.5	75.95	0.00	-35.77

**Explanation**

TPHg = Total petroleum hydrocarbons-as-gasoline

MtBE = Methyl-tert-butyl ether

TBA = Tert-butanol

DIPE = Diisopropyl ether

ETBE = Ethyl-tert-butyl ether

TAME = Tert-amyl-methyl ether

DTW = Depth to water

SPT = Separate-phase hydrocarbon thickness

WTE = Water table elevation

TOC = Top of casing elevation in feet above mean sea level

**Notes**

Samples analyzed by EPA Method 8260B.

**Table 2**  
**Historical Groundwater Monitoring and Analytical Data**

7-Eleven Store #23233  
8499 Gerber Road  
Sacramento, CA

Well ID/ Elevation (TOC)	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl- Benzene (µg/L)	Xylene (µg/L)	TPHg (µg/L)	MtBE (µg/L)	TBA (µg/L)	DPE (µg/L)	EtBE (µg/L)	TAME (µg/L)	1,2- DCA (µg/L)	Notes	DTW (feet)	SPT (feet)	WTE (feet)	
<b>MW-1</b>																	
40.48	05/20/04	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	6.6	74.84	0.00	-34.36
	08/27/04	1.0	<0.50	<0.50	<0.50	<50	<0.50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.4	76.01	0.00	-35.53
	09/17/04	<0.50	<0.50	<0.50	<0.50	--	<0.50	--	--	--	--	--	--	--	76.17	0.00	-35.69
	10/14/04	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	7.5	76.24	0.00	-35.76
<b>MW-2</b>																	
39.44	05/20/04	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	6.2	73.84	0.00	-34.40
	08/27/04	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	9.3	75.01	0.00	-35.57
	10/14/04	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	7.2	75.23	0.00	-35.79
<b>MW-3</b>																	
40.18	05/20/04	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	6.4	74.58	0.00	-34.40
	08/27/04	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	7.7	75.74	0.00	-35.56
	10/14/04	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	6.5	75.95	0.00	-35.77

**Explanation**

TPHg = Total petroleum hydrocarbons-as-gasoline

MtBE = Methyl-tert-butyl ether

TBA = Tert-butano

DPE = Diisopropyl ether

EtBE = Ethyl-tert-butyl ether

TAME = Tert-amyl-methyl ether

DTW = Depth to water

SPT = Separate-phase hydrocarbon thickness

WTE = Water table elevation

TOC = Top of casing elevation in feet above mean sea level

1,2-DCA = 1,2-dichloroethane  
µg/L = micrograms per liter  
mg/L = milligrams per liter  
-- = Not Sampled/Not Analyzed

**Notes**  
Samples analyzed by EPA Method 8260B.

**Table 3**  
**Soil Boring and Well Construction Details**

7-Eleven Site No. 23233  
 8499 Gerber Road  
 Sacramento, California

Well ID	Drill Date	Well Depth (feet bgs)	Diameter (inches)	Screen Top (feet bgs)	Screen Bottom (feet bgs)	Screen Length (feet)	Comments
<b>Groundwater Monitoring Wells</b>							
MW-1	05/06/07/04	85	2	65	85	20	
MW-2	05/06/04	85	2	65	85	20	
MW-3	05/05/04	83	2	63	83	20	
<b>Explanation</b> Wells constructed with polyvinyl-chloride (PVC) casing bgs = Below ground surface							

**ATTACHMENT A  
FIELD NOTES**

Quarterly Groundwater Monitoring  
Report – Fourth Quarter 2004  
7-Eleven Store #23233  
8499 Gerber Road  
Sacramento, California

JOB NAME:	7-Eleven Store #23233	JOB NUMBER:	77EL.23233.04.0703
SITE ADDRESS:	8499 Gerber Road	START DATE:	10-14-04
	Sacramento, CA	DATE PREPARED:	10/14/2004
PREPARED FOR:	Peng Vang	PREPARED BY:	Tom Miller

## SITE VISITATION REPORT

Name(s) Peng Vang Date: 10-14-04 Did you call in?  Yes  No  
 Arrival Time: 1000 "Departure Time: \_\_\_\_\_ Who did you call? Tom Miller  
 Weather Notations: SUN CLOUDY RAIN SNOW Temperature 80 F

### DRUM INVENTORY

<u>4</u>	WATER	<u>0</u>	CARBON	TOTAL OPEN TOP	<u>4</u>
	SOIL		EMPTY	TOTAL BUNG TOP	

### HEALTH AND SAFETY ASSESSMENT

Traffic - moderate to light. Set up around truck & work area for safety. Watch for foot traffic.

### CALIBRATION

Ec	Calibration Reading	<u>1413</u>		
pH	Two Pt. Calibration:	Reading 1 <u>7.01</u>	Reading 2 <u>4.01</u>	

### DO Calibration

Pre-Calibration reading	<u>9.4</u>	Calibration Reading	<u>8.9</u>	Post Calibration Reading
Agitated Water Readings		Pre M&S:	<u>10.3</u>	Post M&S: <u>9.2</u>

### DESCRIPTION OF ACTIVITIES ONSITE AND NOTES

Arrived at site. Check in with store workers. Review HASP. Locate wells open and monitor for DTW, DTB, DO. Decon, purge well record Ph, ec, temp. Sample well transfer purge water to drum on site.

JOB NAME:	7-Eleven Store #23233	JOB NUMBER:	77EL.23233.04.0703
SITE ADDRESS:	8499 Gerber Road	START DATE:	10-14-04
	Sacramento, CA	DATE PREPARED:	10/14/2004
PREPARED FOR:	Peng Vang	PREPARED BY:	Tom Miller

### GROUNDWATER GAUGING FORM

MEASURED TO TOC OR GRADE? Top of Casing

WELL I.D.	DTB	WELL DIAM.	WELL ELEV. TOC	DTW	GAUGED DTB	DTP/PT	D.O. (mg/L)	80% RECHG.	COMMENTS
MW-1	83	2"		76.24	84.87		7.5		
MW-2	85	2"		75.23	84.11		7.2		
MW-3	85	2"		75.95	82.56		6.5		
Estimated Purge Water Volume				0	gallons	0.00	Drums		

***SECOR International Inc.***

## **WATER SAMPLE FIELD DATA SHEET**

PROJECT #: 7-Eleven Store #23233 PURGED BY: Peng Vang WELL I.D.: MW- 1  
CLIENT NAME: 7-Eleven, Inc. SAMPLED BY: Peng Vang SAMPLE I.D.: MW- 1  
LOCATION: 8499 Gerber Road, Sacramento, CA QA SAMPLES: None

DATE PURGED 10-14-04 START (2400hr) 1140 END (2400hr) 1153

DATE SAMPLED 10-14-04 SAMPLE TIME (2400hr) 1205

SAMPLE TYPE:  Groundwater  Surface Water  Treatment Effluent  Other \_\_\_\_\_

**CASING DIAMETER:**      2" X      3" (0.17)      4" (0.38)      5" (0.67)      6" (1.02)      8" (1.50)      Other ( )  
**Casing Volume: (gallons per foot)**

DEPTH TO BOTTOM (feet) = 84.87 CASING VOLUME (gal) = 1.5

DEPTH TO WATER (feet) = 76.24 CALCULATED PURGE (gal) = 4.5

WATER COLUMN HEIGHT (feet) = 8.63      ACTUAL PURGE (gal) = 4.5

## FIELD MEASUREMENTS

**SAMPLE INFORMATION**

SAMPLE DEPTH TO WATER: 76.37 SAMPLE TURBIDITY: Low

80% RECHARGE:  YES      NO      ANALYSES: BTEX, TPHg, 5 Oxygenates, 1,2-DCA via EPA 8260B

ODOR:        SAMPLE VESSEL / PRESERVATIVE: HCL

#### **PURGING EQUIPMENT**

Bladder Pump	Bailer (Teflon)
Centrifugal Pump	Bailer (PVC)
X Submersible Pump	Bailer (Stainless Steel)
Peristaltic Pump	Dedicated

**Other:**

Pump Depth:

## SAMPLING EQUIPMENT

Bladder Pump       Bailer (Teflon)  
 Centrifugal Pump       Bailer ( PVC or  disposable)  
 Submersible Pump       Bailer (Stainless Steel)  
 Peristaltic Pump       Dedicated

**Other:** \_\_\_\_\_

WELL INTEGRITY: good LOCK #: No

REMARKS: DO = 7.5

SIGNATURE:  Page    of

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## **WATER SAMPLE FIELD DATA SHEET**

PROJECT #: 7-Eleven Store #23233 PURGED BY: Peng Vang WELLD ID: MW-2  
CLIENT NAME: 7-Eleven, Inc. SAMPLED BY: Peng Vang SAMPLE ID: MW-2  
LOCATION: 8499 Gerber Road, Sacramento, CA QA SAMPLES: None

DATE PURGED 10-14-04 START (2400hr) 1215 END (2400hr) 1229

DATE SAMPLED 10-14-04 SAMPLE TIME (2400hr) 1240

**SAMPLE TYPE:** Groundwater X Surface Water \_\_\_\_\_ Treatment Effluent \_\_\_\_\_ Other \_\_\_\_\_

**CASING DIAMETER:**      2"      X      3"      (0.38)      4"      (0.67)      5"      (1.02)      6"      (1.50)      8"      (2.60)      Other      ( )

DEPTH TO BOTTOM (feet) = 84.11 Casing Volume (gal) = 1.5

DEPTH TO WATER (feet) = 75.23 CALCULATED PURGE (gal) : 45

WATER COLUMN HEIGHT (feet) = 8.88 ACTUAL PURGE (gal) 4.7

## FIELD MEASUREMENTS

## SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 75.37 SAMPLE TURBIDITY: Low

SAMPLE TURBIDITY: Low

80% RECHARGE:  YES  NO ANALYSES: BTEX, TPHg, 5 Oxygenates, 1,2-DCA via EPA 8260B

ODOR:  SAMPLE VESSEL / PRESERVATIVE: HCL

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
<input type="checkbox"/> Bladder Pump	Bailer (Teflon)	<input type="checkbox"/> Bladder Pump	Bailer (Teflon)
<input type="checkbox"/> Centrifugal Pump	Bailer (PVC)	<input type="checkbox"/> Centrifugal Pump	X Bailer ( <input type="checkbox"/> PVC or <input checked="" type="checkbox"/> disposable)
<input checked="" type="checkbox"/> Submersible Pump	Bailer (Stainless Steel)	<input type="checkbox"/> Submersible Pump	Bailer (Stainless Steel)
<input type="checkbox"/> Peristaltic Pump	Dedicated _____	<input type="checkbox"/> Peristaltic Pump	Dedicated _____
Other: _____		Other: _____	
Pump Depth: _____			

WELL INTEGRITY: Seal LOCK#: No

LOCK# 10

REMARKS:  $B_2 = 7.2$

SIGNATURE:  Page    of

*SECOR International Inc.*

## **WATER SAMPLE FIELD DATA SHEET**

PROJECT #: 7-Eleven Store #23233 PURGED BY: Peng Vang WLL ID: MW-3  
CLIENT NAME: 7-Eleven, Inc. SAMPLED BY: Peng Vang SAMPLE ID: MW-3  
LOCATION: 8499 Gerber Road, Sacramento, CA QA SAMPLES: None

DATE PURGED 10-14-04 START (2400hr) 1250 END (2400hr) 1304

DATE SAMPLED 10-14-04 SAMPLE TIME (2400hr) 1315

**SAMPLE TYPE:** Groundwater  Surface Water  Treatment Effluent  Other

**CASING DIAMETER:**      2"      X      3"      (0.38)      4"      (0.67)      5"      (1.02)      6"      (1.50)      8"      (2.60)      Other      (      )

**Casing Volume: (gallons per foot)**

DEPTH TO BOTTOM (feet) = 82.56 CASING VOLUME (gal) = 1.5

DEPTH TO WATER (feet) = 75.95 CALCULATED PURGE (gal) 4.5

WATER COLUMN HEIGHT (feet) = 6.61 ACTUAL PURGE (gal) =

## FIELD MEASUREMENTS

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**SAMPLE INFORMATION**

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SAMPLE DEPTH TO WATER: 76.07 SAMPLE INTEGRITY: SAMPLE TURBIDITY: Low

SAMPLE TURBIDITY: Low

80% RECHARGE:  YES  NO ANALYSES: BTEX, TPHg, 5 Oxygenates, 1,2-DCA via EPA 8260B

ODOR: ✓ - SAMPLE VESSEL / PRESERVATIVE: HCl.

---

**PURGING EQUIPMENT**

---

<input type="checkbox"/> Bladder Pump	<input type="checkbox"/> Bailer (Teflon)
<input type="checkbox"/> Centrifugal Pump	<input type="checkbox"/> Bailer (PVC)
<input checked="" type="checkbox"/> Submersible Pump	<input type="checkbox"/> Bailer (Stainless Steel)
<input type="checkbox"/> Peristaltic Pump	<input type="checkbox"/> Dedicated

Other:

Pump Depth:

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**SAMPLING EQUIPMENT**

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Bladder Pump       Bailey (Teflon)  
 Centrifugal Pump       Bailey (  PVC or  disposable)  
 Submersible Pump       Bailey (Stainless Steel)  
 Peristaltic Pump       Dedicated

Other:

WELL INTEGRITY: *good*

LOCKE NO

REMARKS: RD = 15

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**ATTACHMENT B  
CERTIFIED LABORATORY ANALYTICAL REPORTS  
AND CHAIN-OF-CUSTODY DOCUMENTATION**

Quarterly Groundwater Monitoring  
Report – Fourth Quarter 2004  
7-Eleven Store #23233  
8499 Gerber Road  
Sacramento, California



Report Number : 40604

Date : 10/20/2004

Debbie Herzog  
SECOR International, Inc.  
3017 Kilgore Road, Suite 100  
Rancho Cordova, CA 95670

Subject : 3 Water Samples  
Project Name : 7-Eleven Store #23233  
Project Number : 77EL.23233.04

Dear Ms. Herzog,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

A handwritten signature in black ink, appearing to read "Joel Kiff".

Joel Kiff



Report Number : 40604

Date : 10/20/2004

Project Name : 7-Eleven Store #23233

Project Number : 77EL.23233.04

Sample : MW-1

Matrix : Water

Lab Number : 40604-01

Sample Date : 10/14/2004

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Toluene	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	10/16/2004
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	10/16/2004
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Toluene - d8 (Surr)	99.0		% Recovery	EPA 8260B	10/16/2004
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	10/16/2004
Dibromofluoromethane (Surr)	101		% Recovery	EPA 8260B	10/16/2004
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	10/16/2004

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Report Number : 40604

Date : 10/20/2004

Project Name : 7-Eleven Store #23233

Project Number : 77EL.23233.04

Sample : MW-2

Matrix : Water

Lab Number : 40604-02

Sample Date : 10/14/2004

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	10/17/2004
Toluene	< 0.50	0.50	ug/L	EPA 8260B	10/17/2004
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	10/17/2004
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	10/17/2004
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	10/17/2004
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	10/17/2004
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	10/17/2004
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	10/17/2004
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	10/17/2004
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	10/17/2004
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	10/17/2004
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	10/17/2004
4-Bromofluorobenzene (Surr)	96.7		% Recovery	EPA 8260B	10/17/2004
Dibromofluoromethane (Surr)	99.6		% Recovery	EPA 8260B	10/17/2004
1,2-Dichloroethane-d4 (Surr)	105		% Recovery	EPA 8260B	10/17/2004

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Report Number : 40604

Date : 10/20/2004

Project Name : 7-Eleven Store #23233

Project Number : 77EL.23233.04

Sample : MW-3

Matrix : Water

Lab Number : 40604-03

Sample Date : 10/14/2004

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	10/17/2004
Toluene	< 0.50	0.50	ug/L	EPA 8260B	10/17/2004
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	10/17/2004
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	10/17/2004
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	10/17/2004
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	10/17/2004
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	10/17/2004
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	10/17/2004
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	10/17/2004
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	10/17/2004
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	10/17/2004
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	10/17/2004
4-Bromofluorobenzene (Surr)	95.5		% Recovery	EPA 8260B	10/17/2004
Dibromofluoromethane (Surr)	98.0		% Recovery	EPA 8260B	10/17/2004
1,2-Dichloroethane-d4 (Surr)	108		% Recovery	EPA 8260B	10/17/2004

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**QC Report : Method Blank Data**  
**Project Name : 7-Eleven Store #23233**  
**Project Number : 77EL.23233.04**

Report Number : 40604  
 Date : 10/20/2004

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Toluene	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Diisopropyl ether (DPE)	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Tert-amy methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	10/16/2004
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	10/16/2004
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Toluene - d8 (Surr)	98.6	%		EPA 8260B	10/16/2004
4-Bromofluorobenzene (Surr)	95.9	%		EPA 8260B	10/16/2004
Dibromofluoromethane (Surr)	97.2	%		EPA 8260B	10/16/2004
1,2-Dichloroethane-d4 (Surr)	103	%		EPA 8260B	10/16/2004
Benzene	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Toluene	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Diisopropyl ether (DPE)	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Tert-amy methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	10/16/2004
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	10/16/2004
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	10/16/2004
Toluene - d8 (Surr)	98.7	%		EPA 8260B	10/16/2004
4-Bromofluorobenzene (Surr)	102	%		EPA 8260B	10/16/2004
Dibromofluoromethane (Surr)	100	%		EPA 8260B	10/16/2004
1,2-Dichloroethane-d4 (Surr)	100	%		EPA 8260B	10/16/2004

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## QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : 7-Eleven Store #23233  
 Project Number : 77EL.23233.04

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Analysis Method	Date Analyzed	Duplicate Spiked Sample Percent Recov.	Spiked Sample Percent Recov.	Spiked Sample Percent Recov.	Relative Percent Diff. Limit
Benzene	40602-04	<0.50	40.0	40.0	38.3	38.0	ug/L	EPA 8260B	10/16/04	95.7	94.9	0.832
Toluene	40602-04	<0.50	40.0	40.0	37.7	37.9	ug/L	EPA 8260B	10/16/04	94.4	94.9	0.536
Tert-Butanol	40602-04	<5.0	200	200	186	186	ug/L	EPA 8260B	10/16/04	93.2	93.2	0.0118
Methyl-t-Butyl Ether	40602-04	1.4	40.0	40.0	38.4	39.1	ug/L	EPA 8260B	10/16/04	92.4	94.3	1.97
Benzene	40604-01	<0.50	40.0	40.0	39.1	38.1	ug/L	EPA 8260B	10/16/04	97.8	95.3	2.60
Toluene	40604-01	<0.50	40.0	40.0	39.1	37.9	ug/L	EPA 8260B	10/16/04	97.8	94.7	3.26
Tert-Butanol	40604-01	<5.0	200	200	201	198	ug/L	EPA 8260B	10/16/04	100	99.0	1.44
Methyl-t-Butyl Ether	40604-01	<0.50	40.0	40.0	43.0	42.6	ug/L	EPA 8260B	10/16/04	107	106	0.869

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Report Number : 40604

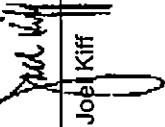
Date : 10/20/2004

QC Report : Laboratory Control Sample (LCS)

Project Name : 7-Eleven Store #23233

Project Number : 77EL.23233.04

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	10/16/04	97.9	70-130
Toluene	40.0	ug/L	EPA 8260B	10/16/04	96.8	70-130
Tert-Butanol	200	ug/L	EPA 8260B	10/16/04	93.7	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	10/16/04	90.1	70-130
Benzene	40.0	ug/L	EPA 8260B	10/16/04	98.0	70-130
Toluene	40.0	ug/L	EPA 8260B	10/16/04	97.1	70-130
Tert-Butanol	200	ug/L	EPA 8260B	10/16/04	97.9	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	10/16/04	107	70-130

  
Joe Kiff

Approved By:

KIFF ANALYTICAL, LLC

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**Chain of Custody Number:**

## **SECOR Chain-of Custody Record**

SECRET CUSTREC FMN 2000